BIXOLON®

SRP-500 Command Manual

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1. Notice

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2. SRP-500 Supported Commands

No.	Command	Function
1	**EOT**	Transmit status
2	**ENQ**	Request to printer
3	**BS ^ E**	Set NV user memory area
4	**HT**	Horizontal tab
5	**LF**	Print and line feed
6	**CR**	Print and carriage return
7	**DLE**	Set real-time command mode
8	**ESC SP**	Set the character right space
9	**ESC !**	Set print mode
10	**ESC %**	Select/cancel user-defined character set
11	**ESC &**	Define user-defined character set
12	**ESC ***	Specify bit image mode
13	**ESC -**	Turn underline mode on/off
14	**ESC 2**	Select default line spacing
15	**ESC 3**	Set line spacing
16	**ESC <**	Return home
17	**ESC =**	Select peripheral device
18	**ESC ?**	Cancel user-defined characters
19	**ESC @**	Initialize printer
20	**ESC D**	Set horizontal tab positions
21	**ESC E**	Turn emphasized mode on/off

No.	Command	Function
22	**ESC G**	Turn double-strike mode on/off
23	**ESC J**	Print and feed paper
24	**ESC R**	Specify an international character set
25	**ESC U**	Specify unidirectional print mode
26	**ESC a**	Set position alignment
27	**ESC d**	Print and feed n lines
28	**ESC g 0**	Define macro (For logo)
29	**ESC g n**	Execute macro (For logo)
30	**ESC m**	Partial cut (one point left uncut)
31	**ESC p**	Generate pulse
32	**ESC r**	Select print color
33	**ESC t**	Select character code table
34	**ESC u**	Transmit peripheral device status
35	**ESC v**	Transmit paper sensor status
36	**ESC {**	Turn upside-down print mode on/off
37	**GS (A**	Execute test print
38	**GS I**	Transmit printer ID
39	**GS V**	Select cut mode and cut paper
40	**GS a**	Enable/disable Automatic Status Back (ASB)
41	**GS r**	Transmit status

2-1 Command Description Items

Command

Function: Command function outline

Code: Command format expressed in ASCII, hexadecimal, and decimal codes

Range: Argument value (Setting range) for the command

Default: Initial argument value for the command

Description: Detailed command function description

Remarks: Additional information about using the command

Differences: Variations depending on the printer model

2-2 Details of Control Commands

EOT

Function: **Transmit status**

Code:

ASCII	EOT	n
Hex	04	n
Decimal	4	n

Range: 1 ≤ n ≤ 4

Default: None

Description: This command transmits the printer-related status specified by n as follows:

n	Function
1	Transmit printer status
2	Transmit off-line status
3	Transmit error status
4	Transmit paper roll sensor status

■ Printer transmits the following status

n=1: Printer status

Bit	Binary	Hex	Decimal	Status
0	0	00	0	Not used. Fixed to Off
1	1	02	2	Not used. Fixed to On
2	0	00	0	Drawer kick-out connector pin 3 is LOW
	1	04	4	Drawer kick-out connector pin 3 is HIGH
3	0	00	0	Online
	1	08	8	Offline
4	1	10	16	Not used. Fixed to On
5	0	00	0	Not used. Fixed to Off
6	0	00	0	Not used. Fixed to Off
7	0	00	0	Not used. Fixed to Off

n=2: Off-line status

Bit	Off/On	Hex	Decimal	Status
0	Off	00	0	Fixed
1	On	02	2	Fixed
2	Off	00	0	Cover is closed
	On	04	4	Cover is open
3	Off	00	0	Paper is not being fed by using the paper FEED button
	On	08	8	Paper is being fed by the paper FEED button
4	On	10	16	Fixed
5	Off	00	0	No paper-end stop
	On	20	32	Printing is being stopped
6	Off	00	0	No error
	On	40	64	Error has occurred
7	Off	00	0	Fixed

n=3: Error status

Bit	Binary	Hex	Decimal	Status
0	0	00	0	Not used. Fixed to Off
1	1	02	2	Not used. Fixed to On
2	0	00	0	No mechanical error
	1	04	4	Mechanical error occurred
3	0	00	0	No autocutter error
	1	08	8	Autocutter error occurred
4	1	10	16	Not used. Fixed to On
5	0	00	0	No unrecoverable error
	1	20	32	Unrecoverable error occurred
6	0	00	0	No auto-recoverable error
	1	40	64	Auto-recoverable error occurred
7	0	00	0	Not used. Fixed to Off

n=4: paper sensor status

Bit	Binary	Hex	Decimal	Status
0	0	00	0	Not used. Fixed to Off
1	1	02	2	Not used. Fixed to On
2,3	00	00	0	Paper near end sensor: paper adequate
	11	0C	12	Paper near end sensor: paper near end
4	1	10	16	Not used. Fixed to On
5,6	00	00	0	Paper end sensor: paper present
	11	60	96	Paper end sensor: paper not present
7	0	00	0	Not used. Fixed to Off

Remarks:

- This command can be executed in a real time mode using DLE.
- In a real time mode, the status is transmitted to the host upon being requested that can check the printer operational condition with it and takes appropriate measures accordingly.

Differences: None

ENQ

Function: **Request to printer**

Code:

ASCII	ENQ	n
Hex	05	n
Decimal	5	n

Range: n = 2

Default: None

Description: This command enables the printer to restore from an error state after clearing the receive and print buffers.

Remarks:

- This command can be executed in a real time mode with DLE preceding it.
- In a real time mode, upon receiving this command, the printer carries out the resume operation to get back normal by clearing error conditions.
- With a serial interface, the error state of the printer, limited to recoverable errors, can be removed by sending this command even if the printer is in offline or busy condition.
- With a parallel interface, this command is not performed in a busy condition because the printer can not receive the data from the host.

Differences: None

BS ^ E

Function: **Set NV user memory area**

Code: None

Range: None

Default: None

Description: This command stores the customized values to the NV user memory area and uses them for the printer operation. The table below explains the functions available in this command. Executes commands related to the user setting mode by specifying the function code fn.

fn	Format	No.	Function
1	BS ^ E pL pH fn	1	Start the user setting mode
2	BS ^ E pL pH fn	2	End the user setting mode (Performs a soft reset)
3	BS ^ E pL pH fn [b18...b11]... [bk8...bk1]	3	Set value(s) for the memory switch
4	BS ^ E pL pH fn a	4	Transmit the settings of the memory switch to the host
5	BS ^ E pL pH fn	5	Specify the paper width
6	BS ^ E pL pH fn	6	Transmit the paper width
11	BS ^ E pL pH fn d1...dk	11	Set the communication conditions for the serial interface
12	BS ^ E pL pH fn a	12	Transmit the communication conditions for the serial interface

Remarks:

- pL, pH is used to set the number of bytes following pH to (pL + pH x 256).
- The change in the items of the NV user memory is available only after entering the user setting mode.
- After completing the user setting mode (Function 2), the printer performs software reset to restore the initial settings in effect at power on. Receive and print buffers are cleared as well.
- Since frequent write operation by this command may deteriorate the performance of the NV memory, it is recommended to write to NV memory when the significant change in the setting is required.
- While processing this command, the printer remains busy. Therefore the data transmission by the host is not available. The real time commands and ASB operations are not processed.

Differences:

- Function (1,2,3,4) are supported

<Function 1> BS ^ E pL pH fn (fn=1)

Code:

ASCII	BS	^	E	pL	pH	fn
Hex	08	5E	45	pL	pH	fn
Decimal	8	94	69	pL	pH	fn

Range: (pL + pH x 256) = 1 (pL=1, pH=0)
fn=1

Default: None

Description: This command starts the user setting mode, enabling the printer to notify that the mode has changed as follows:
[Mode change feedback]

	Hexadecimal	**Decimal**	**Number of Data**
Header	37H	55	1 byte
Flag	20H	32	1 byte
NUL	00H	0	1 byte

Remarks:

- This command is effective only in standard mode, not in page mode.
- Upon entering the user mode setting mode by this command, the printer transmits “mode change feedback” to the host.
- The user setting mode should be enabled prior to processing <Function 2> through 12. Otherwise, those functions are ignored.
- After confirming “mode change feedback”, it is recommended to send the command to reconfigure the NV user memory.

Differences: None

<Function 2> BS ^ E pL pH fn d1 d2 d3 (fn=2)

Code:

ASCII	BS	^	E	pL	pH	fn
Hex	08	5E	45	pL	pH	fn
Decimal	8	94	69	pL	pH	fn

Range: (pL + pH x 256) = 1 (pL=1, pH=0)
fn=2

Default: None

Description: This command terminates the user setting mode and performs a software reset.

Remarks:
- This command activates setting items set in the user setting mode.
- All the setting items will be effective only after performing this command.
- After executing a software reset, the printer resumes the setting in effect at power on.

Differences: None

<Function 3> BS ^ E pL pH fn [b18...b11]...[bk8...bk1] (fn=3)

Code:

ASCII	BS	^	E	pL	fn	[b18...b11]... [bk8...bk1]
Hex	08	5E	45	pL	fn	[b18...b11]... [bk8...bk1]
Decimal	8	94	69	pL	fn	[b18...b11]... [bk8...bk1]

Range:

9≤ (pL + pH x 256) ≤ 65535
fn=3
b=48, 49, 50
1 ≤ k ≤ 10

Default: It varies depending on the printer model

Description:

■ This command changes all the Memory Switch(Msw) 1 through 8 to the value specified by b simultaneously as follows:

- When b=48, 49, the corresponding bit is set to Off and On respectively.
- When b=50, there is no change in the memory switch.

■ The setting items of the memory switch 1 are as follows:

Msw	Value			Function
	3	2	1	
1-1~3	48	48	48	Print density 130%
	48	48	49	Print density 120%
	48	49	48	Print density 110%
	48	49	49	Print density 150%
	49	48	48	Print density 100%
	49	48	49	Print density 140%
	49	49	48	Print density 90%
	49	49	49	Print density 80%

Msw	Value	Function
1-4	48	2 byte character mode not selected
	49	2 byte character mode selected
1-5	48	Print speed 80mm/s
	49	Print speed 50mm/s
1-6	48	Reserved

- The print density adjusts the darkness of characters to be printed.
- 2-byte character mode is selected to support for Chinese, Japanese, and Korean model.
- The printer supports 2 different printing speeds, 80 and 50mm/sec.
  Please be sure that the printing quality at higher speed may be worse than at the lower.

■ The setting items of the memory switch 2 are as follows:

Msw	Value	Function
2-1	48	Font selection: Font A
	49	Font selection: Font B
2-2	48	Autocutter Function: Partial Cutting
	49	Autocutter Function: Full Cutting

■ Code page selection using the memory switch 2-3 through 2-8.

Msw2-8	Msw2-7	Msw2-6	Msw2-5	Msw2-4	Msw2-3	Character Table
48	48	48	48	48	48	PC437
48	48	48	48	49	48	Katakana
48	48	48	49	48	48	PC850
48	48	48	49	49	48	PC860
48	48	49	48	48	48	PC863
48	48	49	48	49	48	PC865
48	48	49	49	48	48	WPC1252

Msw2-8	Msw2-7	Msw2-6	Msw2-5	Msw2-4	Msw2-3	Character Table
48	48	49	49	49	48	PC866
48	49	48	48	48	48	PC852
48	49	48	48	49	48	PC858
48	49	48	49	48	48	PC862
48	49	48	49	49	48	PC864
48	49	49	48	48	48	Thai42
48	49	49	48	49	48	WPC1253
48	49	49	49	48	48	WPC1254
48	49	49	49	49	48	WPC1257
49	48	48	48	48	48	Farsi
49	48	48	48	49	49	WPC1251
49	48	48	49	48	48	PC737
49	48	48	49	49	49	PC775
49	48	49	48	48	48	Thai 14
49	48	49	48	49	48	Hebrew old code
49	48	49	49	48	48	WPC1255
49	48	49	49	49	48	Thai 11
49	49	48	48	48	48	Thai 18
49	49	48	48	49	48	PC855
49	49	48	49	48	48	PC857
49	49	48	49	49	48	PC928
49	49	49	48	48	48	Thai 16
49	49	49	48	49	48	WPC1256
49	49	49	49	48	48	WPC1258
49	49	49	49	49	48	Not used

■ The setting items of the memory switch 3 are as follows:

Specify the 2 dimensional bar codes to be enabled using the memory switch 3-1 through 3-4.

Msw	Value	Function
3-1	48	PDF417 not selected
	49	PDF417 selected
3-2	48	DATAMATRIX not selected
	49	DATAMATRIX selected
3-3	48	MAXI CODE not selected
	49	MAXI CODE selected
3-4	48	QR CODE not selected
	49	QR CODE selected

- The printer supports 4 kinds of 2 dimensional bard codes such as PDF417, DATAMATRIX, MAXI code and QR code.
- The 2-D barcode to be used is activated by specifying the corresponding memory switch.
- The number of enabled 2D barcodes adversely affects the boot time of the printer. Therefore, it is strongly recommended to enable only the bard codes to be used.

■ The setting items of the memory switch 5 are as follows:

Specify the length of idle time before the printer enters the power-down mode.

- Range of idle time: 0 sec ≤ idle time ≤ 90 sec

  When memory switch value is 0, the power-down mode is not active

MSW5-8	MSW5-7	MSW5-6	MSW5-5	MSW5-4	MSW5-3	MSW5-2	MSW5-1	Value(Sec)
48	48	48	48	48	48	48	48	0
48	48	48	48	48	48	48	49	1
48	48	48	48	48	48	49	48	2
48	48	48	48	48	48	49	49	3
48	48	48	48	48	49	48	48	4
.	.	.	.	.	.	.	.	
.	.	.	.	.	.	.	.	
.	.	.	.	.	.	.	.	
48	49	48	49	49	48	49	48	90

■ The setting items of the memory switch 6 are as follows:
Set the standby time before the printer enters the power saving mode.
• Range of standby time: 10 sec ≤ standby time ≤ 255 sec
When memory switch value is 0, the power saving mode does not work.

MSW6-8	MSW6-7	MSW6-6	MSW6-5	MSW6-4	MSW6-3	MSW6-2	MSW6-1	Value
48	48	48	48	49	48	49	48	10
48	48	48	48	49	48	49	49	11
48	48	48	48	49	49	48	48	12
48	48	48	48	49	49	48	49	13
48	48	48	48	49	49	49	48	14
.	.	.	.	.	.	.	.	
.	.	.	.	.	.	.	.	
.	.	.	.	.	.	.	.	
49	49	49	49	49	49	49	49	255

■ The setting items of the memory switch 7 are as follows:
Specify the magnetic card read mode using the memory switch 7-5 through 7-8.

MSW	8	7	6	5	Function
7-5~8	48	48	48	49	Track 1/2/3 read mode command
	48	48	49	48	Track 1 read mode AUTO trigger
	48	48	49	49	Track 2 read mode AUTO trigger
	48	49	48	48	Track 3 read mode AUTO trigger
	48	49	48	49	Track 1/2 read mode AUTO trigger
	48	49	49	48	Track 2/3 read mode AUTO trigger
	48	49	49	49	Track 1/2/3 read mode AUTO trigger
	49	48	48	48	MSR not used

■ The setting items of the memory switch 8 are as follows:

- Either the character font A or B is selected.
- The beep is activated for the audible paper empty warning signal.
- The beep is activated for the audible low battery warning signal.
- The label printing is available by the setting.

Msw	Value	Function
8-1	48	Reserved
8-2	48	Font A
	49	Font B
8-3	48	Beep disabled for paper end
	49	Beep enabled for paper end
8-4	48	Beep enabled for low battery status
	49	Beep disabled for low battery status
8-5	48	Label mode disabled
	49	Label mode enabled
8-6	48	Reserved
8-7	48	Reserved
8-8	48	Reserved

■ The setting items of the memory switch 10 are as follows:
Specify the roll paper width to be used and color printing

Switch	Function	ON	OFF
1~4	Reserved	--	Fixed to OFF
5	Printing width	2 inch	3 inch
6	2Color support	Enable	Disable
7~8	Reserved	--	Fixed to OFF

Remarks: None

Differences: ■ The memory switch 1 is available.

■ The setting items of the memory switch 1 is as follows:

Msw 1-6	Msw 1-5	Msw 1-4	Msw1-3	Msw 1-2	Msw 1-1	Character Table
48	48	48	48	48	48	PC437: U.S.A
48	48	48	48	49	48	PC850: Multilingual
48	48	48	48	49	49	PC860: Portuguese
48	48	48	49	48	48	PC863: Canadian-French
48	48	48	49	48	49	PC865: Nordic
48	49	48	48	48	48	WPC1252: Latin I
48	49	48	48	48	49	PC866: Cyrillic #2
48	49	48	48	49	48	PC852: Latin II)
48	49	48	48	49	48	PC858: Euro
48	49	48	48	48	49	PC862: Hebrew DOS code
48	49	48	48	48	49	PC864: Arabic
48	49	48	49	49	49	Thai 42
48	49	49	48	48	48	WPC1253: Greek
48	49	49	48	49	48	WPC1257: Baltic
48	49	49	48	49	49	Farsi
48	49	49	48	48	49	PC737: Greek
48	49	49	49	49	49	Thai 14
49	48	48	48	49	48	Thai 11
49	48	48	48	49	49	Thai 18
49	48	48	49	49	48	PC928: Greek

<Function 4> BS ^ E pL pH fn a (fn=4)

Code:

ASCII	BS	^	E	pL	pH	fn	a
Hex	08	5E	45	02	00	04	a
Decimal	8	94	69	2	0	4	a

Range:

(pL + pH x 256) = 2 (pL=2, pH=0)
fn=4
a=1

Default:

None

Description:

This command transmits the setting value of the memory switch corresponding to a.

	Hexadecimal	**Decimal**	**Amount of Data**
Header	37H	55	1 byte
Identifier	21H	33	1 byte
Setting value	30H or 31H	48 or 49	8 bytes
NUL	00H	0	1 byte

■ The setting value is sent from bit 8 to bit 1, consisting of 8 bytes in total.
- Off: Hexadecimal = 30H / Decimal = 48
- On: Hexadecimal = 31H / Decimal = 49

Remarks:

None

Differences:

None

<Function 5> BS ^ E pL pH fn nL nH (fn=5)

Code:

ASCII	BS	^	E	pL	pH	fn	nL	nH
Hex	08	5E	45	03	00	05	nL	nH
Decimal	8	94	69	3	0	5	nL	nH

Range: nL + nH × 256 = 2, 4, 5 (nL = 2, 4, 5, nH = 0)
fn=5

Default: (nL + nH x 256) = 5 (n_L = 5, n_H = 0)

Description: This command specifies the paper width to be used as follows:

(nL + nH x 256)	Paper width
2	57.5mm (2.26 inch)
4	69.5 mm (2.74 inch)
5	76 mm (3.00 inch)

Remarks:
- The setting of the paper width can be changed by the control panell operation after entering “Memory Switch Setting Mode”.

Differences: None

<Function 6> BS ^ E pL pH fn a (fn=6)

Code:

ASCII	BS	^	E	pL	pH	fn	a
Hex	08	5E	45	02	00	06	a
Decimal	8	94	69	2	0	6	a

Range:

(pL + pH x 256) = 2 (pL = 2, pH = 0)
fn = 6
a = 3
(nL + nH x 256) = 5 (nL = 5, nH = 0)

Default:

None

Description:

The printer transmits to the host the setting value of the paper width.

[Data format to be sent]

Transmit data	Hex	Decimal	Amount of Data
Header	37H	55	1 byte
Identifier	27H	39	1 byte
a(=3)	33H	51	1 byte
Separation code	1FH	31	1 byte
Paper width data	32H - 35H	50 - 53	1 byte
NUL	00H	0	1 byte

Remarks:

- When the value of the paper width is set to 2 for accommodation of 57.5mm roll paper, the paper width data is converted to ASCII character data, 0x32 and transmitted to the host.
- The setting of the paper width can be changed by the control panel operation after entering “Memory Switch Setting Mode”.

Differences:

None

<Function 11>BS ^ E pL pH fn a d1….dk (fn=11)

Code:

ASCII	BS	^	E	pL	pH	fn	[d11...d16][d12][d13][d14]
Hex	08	5E	45	pL	pH	0B	[d11...d16][d12][d13][d14]
Decimal	8	94	69	pL	pH	11	[d11...d16][d12][d13][d14]

Range:

8 ≤ (pL + pH x 256) ≤ 10 (8 ≤ pL ≤ 10, 0 ≤ pH ≤ 255)
fn=11
48 ≤ d ≤ 57

Default:

Parity: no parity, Flow control: DTR/DSR, Data length: 8 bits

Description:

This command specifies the configuration items of the serial interface such as the baud rate, parity, flow control, data length, collectively.

Setting Order	Configuration item
1	Transmission speed
2	Parity
3	Flow control
4	Data length

The array of parameters change according to pL, pH as follows:

When (pL+pH x256) =10:
d11~d61: Baud rate value
d12: Parity setting value
d13: Flow control setting value
d14: Data length setting value

When (pL+pH x256) =9:
d11~d51: Baud rate value
d12: Parity setting value
d13: Flow control setting value
d14: Data length setting value

When (pL+pH x256) =8:
d11~d41: Baud rate value
d12: Parity setting value
d13: Flow control setting value
d14: Data length setting value

For instance, when defining 19200 bps, (pL = 9, pH=0) and ASCII converted character data(Hexadecimal = 31H,39H,320H,30H,30H//Decimal= 49, 57, 50, 48, 48) of 19200 should be sent.

Baud rate is specified as follows: (4 ≤ k ≤ 6)

d11~dk1	Function
“115200”	Baud rate 115200
“57600”	Baud rate 57600
“38400”	Baud rate 38400
“19200”	Baud rate 19200
“9600”	Baud rate 9600
“4800”	Baud rate 4800
“2400”	Baud rate 2400

Parity is specified by d12 as follows:

d12	Function
48	Select no parity
49	Select odd parity
50	Select even parity

Flow control is specified by d13 as follows:

d13	Function
48	Select flow control DTR/DSR
49	Select flow control XON/XOFF

Data Length(a=4) is specified by d14 as follows:

d14	Function
55	Select 7bits length
56	Select 8bits length

Remarks:

- The change of settings of serial interface is available by adjusting the corresponding DIP switch that is recommended for setting of serial interface.
- To enable the settings by this command, it is first required to adjust the DIP switch that activates the serial interface configuration set by the memory switch.

Differences:

- Buad rate range available: 2400 – 19200 bps

<Function 12> BS ^ E pL pH fn a (fn=12)

Code:

ASCII	BS	^	E	pL	pH	fn	a
Hex	08	5E	45	pL	pH	fn	a
Decimal	8	94	69	pL	pH	fn	a

Range: (pL + pH x 256) = 2 (pL=2, pH=0)
fn=12, 1 ≤ a ≤ 4

Default: None

Description: ■ This command transmits the communication conditions of the serial interface according to a as follows:

a	Communication Condition
1	Baud rate
2	Parity
3	Flow control
4	Data length

■ The data format to be transmitted is as follows:

	Hexadecimal	Decimal	Amount of Data
Header	37H	55	1 byte
Identifier	33H	39	1 byte
Communication condition(a)	31H - 34H	49 - 52	1 byte
Separator	1FH	31	1 byte
Setting value	30H - 39H	48 - 57	1 - 6 bytes
NUL	00H	0	1 byte

Communication condition is define by “a” and setting value defined as shown in the following.

■ Configuration of the setting value

• When the baud rate (a=1) is specified:

Baud rate (bps)	d1	d2	d3	d4	d5	d6
2400	50	52	48	48	--	--
4800	52	56	48	48	--	--
9600	57	54	48	48	--	--
19200	49	57	50	48	48	--
38400	51	56	52	48	48	--
57600	53	55	54	48	48	--
115200	49	49	53	50	48	48

• When the parity setting (a=2) is specified:

d1	Parity
48	No parity
49	Odd parity
50	Even parity

• When the flow control setting (a=3) is specified:

d1	Flow control
48	DTR / DSR (Fixed)
49	XON / XOFF

• When the data length setting (a=4) is specified:

d1	Data length
55	7 bits
56	8 bits

Remarks: None

Differences: None

HT

Function: **Horizontal tab**

Code:

ASCII	HT
Hex	09
Decimal	9

Range: None

Default: None

Description: This command moves the print position to the next horizontal tab position. If the next horizontal tab position is not specified, this command will be void.

Remarks:
- The horizontal tab position is set by <ESC> D.
- With the underline mode turned on, the underline printing is not applied to the tab space created by this command.

Differences: None

LF

Function: **Print and line feed**

Code:

ASCII	LF
Hex	0A
Decimal	10

Range: None

Default: None

Description: This command prints the data in the print buffer and feeds one line based on the current set line spacing in standard mode.

Remarks: ■ In page mode, the printer does not perform actual printing, but moving only the print position to the next line.

Differences: None

CR

Function: **Print and carriage return**

Code:

ASCII	CR
Hex	0D
Decimal	13

Range: None

Default: None

Description: This command prints the data. With auto line feed enabled, it performs printing and one line feeding same as LF.

Remarks: ■ Auto line feed is only enabled with a parallel interface using the DIP switch.

Differences: None

DLE

Function: **Set real-time command mode**

Code:

ASCII	DLE
Hex	10
Decimal	16

Range: None

Default: None

Description: This command enables commands to be operable in real-time.

Remarks:
- A single command following this command is regarded as a real time command.
- The real time command is stored into the receive buffer and executed with higher priority than other commands.
- If this command is processed as a parameter of the other command, the data following this command might bring about the unwanted result.
- The commands that are allowed to be executed in real time mode vary depending on the printer model.

Differences:
- Commands that can be executed in real time mode: EOT, ENQ, GS I , GS a, GS r,

ESC SP

Function: **Set the character right space**

Code:

ASCII	ESC	SP	n
Hex	1B	20	n
Decimal	27	32	n

Range: 0 ≤ n ≤ 255

Default: n=0

Description:
- This command sets the size of space to right of character.
  - Right space = n × [horizontal motion units].

Remarks:
- In a double width mode, the right space will be doubled.
- Horizontal motion unit varies depending the printer model.

Differences:
- Horizontal motion unit: 0.122mm(1/208 inch)

ESC !

Function: **Set print mode**

Code:

ASCII	ESC	!	n
Hex	1B	21	n
Decimal	27	33	n

Range: 0 ≤ n ≤ 255

Default: n=0

Description: This command selects print mode(s) with bits having following meanings.

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Character font A selected
	On	01	1	Character font B selected
1,2	Off	00	0	Reserved
3	Off	00	0	Emphasized mode not selected
	On	08	8	Emphasized mode selected
4	Off	00	0	Double-height mode not selected
	On	10	16	Double-height mode selected
5	Off	00	0	Double-width mode not selected
	On	20	32	Double-width mode selected
6	Off	00	0	Reserved
7	Off	00	0	Underline mode not selected

Remarks:
- As alternative to this command, ESC M, ESC E and ESC – can be used for the selection for character font, emphasized mode and underline mode respectively.
- The entire character print width is underlined, but the space skipped by HT is not.
- If both double width and double height are selected, the characters will be quadrupled.

Differences:
- Character configuration(Font A, Font B): Font A(14 × 12), Font B(12 x 12)

ESC %

Function: **Select/cancel user-defined character set**

Code:

ASCII	ESC	%	n
Hex	1B	25	n
Decimal	27	37	n

Range: 0 ≤ n ≤ 255

Default: n = 0

Description:
■ This command selects/deselects user-defined character set that is downloaded by user. To make it valid, the least significant bit should be defined like following.
- When n=0, the user-defined character set is deselected.
- When n=1, the user-defined character set is selected.

Remarks:
■ The resident character set is enabled and used right after canceling the user defined character set.

Differences: None

ESC &

Function: **Define user-defined character set**

Code:

ASCII	ESC	&	y c1 c2 [x1 d1 ... d(y × x1)]... [xk d1 ... d(y × xk)]
Hex	1B	26	y c1 c2 [x1 d1 ... d(y × x1)]... [xk d1 ... d(y × xk)]
Decimal	27	38	y c1 c2 [x1 d1 ... d(y × x1)]... [xk d1 ... d(y × xk)]

Range:
y = 2
32 ≤ c1 ≤ c2 ≤ 126
0 ≤ x ≤ 14 (Font A)
0 ≤ x ≤ 12 (Font B)
0 ≤ d ≤ 255
k = c2 – c1 + 1

Default: None

Description:
■ This command defines user-defined characters for character codes in a designated range from the start character code, c1 to the end character code, c2.
• y denotes the number of bytes in the vertical direction, x the number of dots in the horizontal direction, and d the dot data for the user-defined characters.

Remarks:
■ Alphanumeric characters (20H (decimal 32) to 7EH (decimal 126)) are definable.
■ Once user defined characters are defined, they remain available until they are redefined; ESC ? or ESC @ is executed; the printer is reset.
■ The following shows the relationship between the definition data and printing result with downloaded character consisting of 9x7 dots.

d1	d3	d5	d7	d9	d11	d13	MSB LSB
d2	d4	d6	d8	d10	d12	d14	MSB LSB

Differences: ■ Character configuration(Font A, Font B): Font A(14 × 12), Font B(12 x 12)

ESC *

Function: **Specify bit image mode**

Code:

ASCII	ESC	*	m	nL	nH	d1...dk
Hex	1B	2A	m	nL	nH	d1...dk
Decimal	27	42	m	nL	nH	d1...dk

Range:
m = 0, 1
$0 \le n_L \le 255$
$0 \le n_H \le 3$
$0 \le d \le 255$
$k = n_L + n_H \times 255$

Default: None

Description:
■ This command specifies the bit image for the mode m as to the number of dots specified by nL and nH.
- d specifies the bit image data with 1 for printed data and 0 for not printed.
- k denotes the number of horizontal dots.

DPI : Dots per Inch (25.4mm)

m	Mode	Number of dots in vertical direction	Vertical dot density (DPI)	Horizontal dot density (DPI)	Number of bytes (k)
0	8-dot single-density	8	203/3	203/2	nL + nH x 256
1	8-dot double-density	8	203/3	203	nL + nH x 256
32	24-dot single-density	24	203	203/2	(nL + nH x 256) x 3
33	24-dot double-density	24	203	203	(nL + nH x 256) x 3

Remarks:
■ If the bit image data being entered is beyond the number of dots to be printed, the surplus will be discarded.
■ If the value of m is beyond the conditions, the subsequent data after m will be treated as normal data.

Differences:

DPI : Dots per Inch (25.4mm)

m	Mode	Number of dots in vertical direction	Vertical dot density(DPI)	Horizontal dot density (DPI)	Number of bytes (k)
0	8-dot single-density	8	96	104	nL + nH x 256
1	8-dot double-density	8	96	208	nL + nH x 256

ESC –

Function: **Turn underline mode on/off**

Code:

ASCII	ESC	-	n
Hex	1B	2D	n
Decimal	27	45	n

Range: 0 ≤ n ≤ 2, 48 ≤ n ≤ 50

Default: n=0

Description:

■ This command enables the print data following it to be printer out underlined.

• The underline mode varied depending on the following values of n:

n	Function
0,48	Turns off underline mode
1,49	Turns on underline mode, set at 1-dot thick
2,50	Turns on underline mode, set at 2-dot thick

Remarks:

■ The spaces generated by horizontal tab are not underlined.

■ Using bit 7 of ESC !, the underline mode can be activated/deactivated as well.

Differences: None

ESC 2

Function: **Select default line spacing**

Code:

ASCII	ESC	2
Hex	1B	32
Decimal	27	50

Range: None

Default: None

Description: This command sets the default line spacing The default line spacing is approximately 3.75 mm, which is equivalent to 30 dots.

Remarks:

- The line spacing can be set independently in standard mode and in page mode.
- The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences:

- Default line spacing: 4.23 mm(16 dots)

ESC 3

Function: **Set line spacing**

Code:

ASCII	ESC	3	n
Hex	1B	33	n
Decimal	27	51	n

Range: 0 ≤ n ≤ 255

Default: Corresponding to the default line spacing defined by ESC 2

Description:
- This command sets the line spacing using a following rule.
  - Line spacing = n x (vertical or horizontal motion units)

Remarks:
- With standard mode selected, the vertical motion unit is used.
- In page mode, the horizontal motion unit is applied when printing start poison is defined to the upper right or lower right of print area using ESC T, otherwise, the vertical motion unit is used.
- The line spacing is settable independently for each of standard and page modes.

Differences:
- Vertical or horizontal motion unit and maximum line spacing settable:

Model	Vertical unit	Horizontal unit	Max line spacing
SRP-500	0.132 mm (1/192 inches)	0.122mm (1/208 inches)	33.66mm

ESC <

Function: **Return home**

Code:

ASCII	ESC	<
Hex	1B	3C
Decimal	27	60

Range: None

Default: None

Description: This command moves the print head to the standby position.

Remarks:
- The standard position is on the left.
- After processing this command, the print position may be readjusted.

Differences: None

ESC =

Function: **Select peripheral device**

Code:

ASCII	ESC	=	n
Hex	1B	3D	n
Decimal	27	61	n

Range: 1 ≤ n ≤ 3

Default: None

Description: This command selects the device to which the host computer communicates according to n as follows:

n	Function
1	Enables the printer
2	Disables the printer
3	Enables the printer

Remarks:
- The printer discards all of the received data commands with the exception of ESC = and real-time commands while being disabled.
- The normal operation will be resumed by ESC @, power cycling or printer reset.
- If ASB is activated when the printer is disabled by this command, the status is transmitted to the host at a preset interval.

Differences: None

ESC ?

Function: **Cancel user-defined characters.**

Code:

ASCII	ESC	?	n
Hex	1B	3F	n
Decimal	27	63	n

Range: 32 ≤ n ≤ 126

Default: None

Description: This command removes user-defined character specified by character code n.

Remarks:
- In place of the deleted user-defined character, the cooresponding resident character is printed.
- The user-defined characters for each font can be deleted independently.

Differences: None

ESC @

Function: **Initialize printer**

Code:

ASCII	ESC	@
Hex	1B	40
Decimal	27	64

Range: None

Default: None

Description: This command cancels conditions previously set and initializes the printer to the conditions having existed at power on.

Remarks:
- The data in the printer buffer is cleared.
- The settings of DIP switch are not re-read.
- The data in the receive buffer is not discarded.
- All of the settings such as print mode and line feed are cleared.
- NV graphics and NV user memory are not cleared.
- In page mode, this command removes the data in print areas, restores the initial settings and returns to standard mode.

Differences: None

ESC D

Function: **Set horizontal tab position**

Code:

ASCII	ESC	D	n1...nk	NUL
Hex	1B	44	n1...nk	00
Decimal	27	68	n1...nk	0

Range: 1 ≤ n ≤ 255 , 0 ≤ k ≤ 32

Default: n=8, 16, 24, 32, 40,....., 232, 240, 248

Description:
- This command sets the horizontal tab position.
  - n defines the number of columns from the beginning of the line to the horizontal tab setting.
  - k denotes the number of horizontal tab positions to be set.
  - The horizontal tab position is stored as a value of [character width x n] measured form the beginning of the line.

Remarks:
- The data [n]k signifying the set position is transmitted in the ascending order and ends with a NUL code.
- ESC D NUL cancels all horizontal tab positions.
- Tab position is set at the value of [character width x n] from the beginning of the line.
- The character width includes the space to the right of the character, and it will be twice the normal character when the double width characters are selected.
- If the data [n]k is equal to or smaller than the preceding data [n]k-1, the horizontal tab setting has been completed.
- Up to 32 horizontal tabs can be set, the data exceeding this limit is processed as normal ones.
- Even if the character width is changed after setting the horizontal tab positions, the horizontal tab positions remain unchanged.

Differences: None

ESC E

Function: **Turn emphasized mode on / off**

Code:

ASCII	ESC	E	n
Hex	1B	45	n
Decimal	27	69	n

Range: 0 ≤ n ≤ 255

Default: n=0

Description:
- This command turns emphasized mode on or off by toggling the least significant bit of n like following.
  - When the LSB of n is 0, emphasized mode is turned off.
  - When the LSB of n is 1, emphasized mode is turned on.

Remarks:
- The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

ESC G

Function: **Turn double-strike mode on/off**

Code:

ASCII	ESC	G	n
Hex	1B	47	n
Decimal	27	71	n

Range: 0 ≤ n ≤ 255

Default: n=0

Description:
- This command turns double-strike mode on or off by toggling the least significant bit of n like following.
  - When the LSB of n is 0, emphasized mode is turned off.
  - When the LSB of n is 1, emphasized mode is turned on.

Remarks:
- The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

ESC J

Function: **Print and feed paper**

Code:

ASCII	ESC	J	n
Hex	1B	4A	n
Decimal	27	74	n

Range: 0 ≤ n ≤ 255

Default: None

Description: This command prints the data in the print buffer and feeds the paper [n X vertical motion unit].

Remarks:
- The maximum feed amount available varies depending on the printer model.
- With standard mode selected, the vertical motion unit is used.
- In page mode, the horizontal motion unit is applied when printing start poison is defined to the upper right or lower right of print area using ESC T, otherwise, the vertical motion unit is used.
- When used in page mode, this command moves only the print position, not executing actual printing.

Differences:
- Vertical motion unit and maximum feed amount:

Model	Vertical unit	Max feed amount
SRP-500	0.132 mm (1/192 inches)	33.66mm

ESC R

Function: **Specify international character set**

Code:

ASCII	ESC	R	n
Hex	1B	52	n
Decimal	27	82	n

Range: 0≤ n≤7, 9

Default: n=0

Description: This command specifies international characters according to n values.

n	Character set	n	Character set
0	U.S.A	7	Spain I
1	France	9	Norway
2	Germany	10	Denmark II
3	U.K	11	Spain II
4	Denmark I	12	Latin America
5	Sweden	13	Korea
6	Italy		

Remarks: ■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

ESC U

Function: **Specify unidirectional print mode**

Code:

ASCII	ESC	U	n
Hex	1B	55	n
Decimal	27	85	n

Range: 0 ≤ n ≤ 255

Default: n = 0

Description:
- This command selects/deselects the unidirectional print according to the value of n that is valid only for the least significant bit.
  - Unidirectional print mode is turned on with n=0, and turned off with n=1

Remarks:
- In this mode, the printer will print from the left to the right, preventing horizontal shear in printing, in particular, for double height print.
- The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

ESC a

Function: **Set position alignment**

Code:

ASCII	ESC	a	n
Hex	1B	61	n
Decimal	27	97	n

Range: 0 ≤ n ≤2, 48 ≤ n ≤50

Default: n=0

Description: This command specifies position alignment for all data in one line in standard mode, using n as follows:

n	Alignment
0, 48	Left alignment
1, 49	Center alignment
2, 50	Right alignment

Remarks:
- This command is not effective in page mode. If this command is processed in page mode, the setting by this command becomes effective when the printer returns to standard mode.
- The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

ESC d

Function: **Print and feed n lines.**

Code:

ASCII	ESC	d	n
Hex	1B	64	n
Decimal	27	100	n

Range: 0 ≤ n ≤ 255

Default: None

Description: This command feeds the paper by n lines after printing the data in the print buffer.

Remarks:
- The per-line paper feed amount is based on the value set by the line spacing related commands, ESC 2 and ESC 3.
- In page mode, this command moves only the print position, not performing actual print.
- If the feed amount set is beyond the maximum feed amount, the feed amount will be set to the maximum feed amount automatically.

Differences:
- Maximum feed amount: 255 lines.

ESC g 0

Function: **Define macro**

Code:

ASCII	ESC	g	0	<k> [<n_H > <n_L>]$_k$ [d1…dm]$_k$
Hex	1B	67	00	<k> [<n_H > <n_L>]$_k$ [d1…dm]$_k$
Decimal	27	103	0	<k> [<n_H > <n_L>]$_k$ [d1…dm]$_k$

Range:

$k \le 10$
$0 \le n_L \le 255$
$0 \le n_H \le 255$
$[(256\times n_H) + n_L]_1 + \ldots.. + [(256\times n_H) + n_L]_k$ < 2Mbit (256KB)
$0 \le d \le 255$

Default: None

Description:

■ This command defines macro into NV memory such as a logo image.
- k denotes the total number of macro to be stored in NV memory.
- m=(256× n_H) + n_L specifies the size of macro in byte

Remarks:

■ 2M bit (256KB) of the flash is allocated for saving NV bit image.
■ This command is useful to define NV bit image (Logo).
■ The NV bit image is printed by ESC g n.

Differences: None

ESC g n

Function: **Execute macro**

Code:

ASCII	ESC	g	n
Hex	1B	67	n
Decimal	27	103	n

Range: 1 ≤ n ≤ 10

Default: None

Description:
- This command executes macro using the value of n.
  - n denotes the macro index number that is automatically given to the macro in a downloading order while being defined by ESC g.

Remarks:
- The NV bit image should be defined by ESC g preceding this command. When executing the macro not being defined, this command is ignored.

Differences: None

ESC m

Function: **Partial cut**

Code:

ASCII	ESC	m
Hex	1B	6D
Decimal	27	109

Range: None

Default: None

Description: This command executes a partial cut of the paper with one point left uncut.

Remarks:
- The same partial cut as this command is executed using ESC i and GS V.

Differences:
- This command is effective for the printer equipped with an autocutter.
- Autocutter operation should be enabled by setting the autocutter control DIP switch.
- If the autocutter control DIP switch of the printer not equipped with autocutter is set, the printer does not operate, displaying the error signal by LED.

ESC p

Function: **Generate pulse**

Code:

ASCII	ESC	p	m	t1	t2
Hex	1B	70	m	t1	t2
Decimal	27	112	m	t1	t2

Range: m = 0, 1, 48, 49
0 ≤ t1 ≤ 255, 0 ≤ t2 ≤ 255

Default: None

Description: This command outputs the signals specified with t1 and t2 to the connector pins defined by m.

m	**Connector pin**
0, 48	Drawer kick-out connector pin 2
1, 49	Drawer kick-out connector pin 5

Remarks:

■ The ON time is [t1 x 2ms], and the OFF time is as [t2 x 2ms].
- If t2 is smaller than t1, OFF time is set to [t1 x 2ms].

Differences: None

ESC r

Function: **Select print color**

Code:

ASCII	ESC	r	n
Hex	1B	72	n
Decimal	27	114	n

Range: n = 0, 1, 48, 49

Default: n = 0

Description:
- This command selects a print color for each line, using n as follows.
  - When n = 0 or 48, black is selected.
  - When n=1 or 49, red is selected.

Remarks:
- In standard mode, this command is valid only when processed at the beginning of the line.
- In page mode, the color selected by this command is applied to all data collectively printed by FF.
- GS (N and GS (L can be used to specify two-color printing.
- The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences: None

ESC t

Function: **Select character code table**

Code:

ASCII	ESC	t	n
Hex	1B	74	n
Decimal	27	116	n

Range: 0 ≤ n ≤ 5, 16 ≤ n ≤ 19, 21 ≤ n ≤ 31, 33 ≤ n ≤ 41, n=255

Default: For model not supporting Thai character: n=0
For model supporting Thai character support : n = 20

Description: This command specifies code page according to the value of n as follows:

n	Code page
0	Page 0 437 (USA, Standard Europe)
1	Page 1 Katakana
2	Page 2 850 (Multilingual)
3	Page 3 860 (Portuguese)
4	Page 4 863 (Canadian-French)
5	Page 5 865 (Nordic)
16	Page 16 1252 (Latin I)
17	Page 17 866 (Cyrillic #2)
18	Page 18 852 (Latin 2)
19	Page 19 858 (Euro)
21	Page 21 862 (Hebrew DOS code)
22	Page 22 864 (Arabic)
23	Page 23 Thai42
24	Page 24 1253 (Greek)
25	Page 25 1254 (Turkish)

n	Code page
26	Page 26 1257 (Baltic)
27	Page 27 Farsi
28	Page 28 1251 (Cyrillic)
29	Page 29 737 (Greek)
30	Page 30 775 (Baltic)
31	Page 31 Thai14
33	Page 33 1255 (Hebrew New code)
34	Page 34 Thai 11
35	Page 35 Thai 18
36	Page 36 855 (Cyrillic)
37	Page 37 857 (Turkish)
38	Page 38 928 (Greek)
39	Page 39 Thai 16
40	Page 40 1256 (Arabic)
41	Page 41 1258 (Vietnam)
255	User Code Page (Space)

Remarks:

■ The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Differences:

■ Code pages not supported:
- n = 1, 25, 28, 30, 32,33, 36,37, 39,40,41
- When n=255, code page 0(437) is selected.

ESC u

Function: **Transmit peripheral device status**

Code:

ASCII	ESC	u	n
Hex	1B	75	n
Decimal	27	117	n

Range: n = 0, 48

Default: None

Description: This command transmits a byte of data with the least significant bit(LSB) specifying the peripheral device status as follows:

LSB	Status of drawer kick-out connector pin 3
0	Low
1	High

Remarks: ■ The peripheral device status can be transmitted using GS r.

Differences: None

ESC v

Function: **Transmit paper sensor status**

Code:

ASCII	ESC	v
Hex	1B	76
Decimal	27	118

Range: None

Default: None

Description:
- This command transmits a byte of data specifying the paper sensor status.
- The status of paper near end and paper end sensors is sent to the host as follows:
  - When paper near end is detected, 0x03 is transmitted.
  - When paper end is detected, 0xC is transmitted.

Remarks:
- The paper sensor status can be transmitted using GS r.
- The near end senor is optional while paper end sensor required.
- If the printer is not equipped with a near end sensor, the paper near end sensor is considered as normal condition.

Differences: None

ESC {

Function: **Turns upside-down printing mode on/off**

Code:

ASCII	ESC	{	n
Hex	1B	7B	n
Decimal	27	123	n

Range: 0 ≤ n ≤ 255

Default: n=0

Description: This command selects/deselects upside-down printing mode according to the least significant bit as follows.

LSB	Upside-down mode
0	Turned off
1	Turned on

Remarks:

- This command is valid only when entered at the beginning of the line.
- The upside-down print mode has no effect in page mode. If this command is processed in page mode, upside-down printing mode is enabled when the printer returns to standard mode.
- 180 rotated characters are printed from right to left in upside-down print mode.
- The setting of this command remains effective until ESC !, ESC @, printer reset or power cycling is executed.

Example

Normal	Upside- down Mode
ABCDEF	ꟻƎDƆBA

Differences: None

GS (A

Function: **Execute test print**

Code:

ASCII	GS	(	A	pL	pH	n	m
Hex	1D	28	41	pL	pH	n	m
Decimal	29	40	65	pL	pH	n	m

Range: (pL + pH x 256) = 2 (pL=2, pH=0)
0 ≤ n ≤ 2, 48 ≤ n ≤ 50
1 ≤ m ≤ 3, 49 ≤ m ≤ 51

Default: None

Description: ■ This command prints a specified pattern for testing on a roll paper.

• Roll paper is selected with n specified as follows:

n	Paper type
0, 48 1, 49 2, 50	Roll paper

• Different kinds of test patterns are selected according to m as follows:

m	Test pattern
1, 49	Hexadecimal dump mode
2, 50	Printer configuration printing
3, 51	Rolling pattern printing

Remarks:
- ■ The printer cancels a macro definition in progress If this command is processed. The macro becomes invalid.
- ■ After completion of this command, a software reset is executed automatically to restore the printer status set during power cycling.
- ■ All of the data transmitted from the host to the printer is printed and identified in hexadecimal dump mode.
- ■ The real time command and ASB operations are not executed during the printing of printer configuration (m=2, 50) and rolling pattern (m=3, 51).

Differences: None

GS I

Function: **Transmits printer ID**

Code:

ASCII	GS	I	n
Hex	1D	49	n
Decimal	29	73	n

Range: 1 ≤ n ≤ 69

Default: None

Description:

■ This command transmits the printer ID or information.

• Transmits 1 byte of printer ID, using n as follows:

n	Printer ID	Specification
1,49	Printer model ID	Printer model
2,50	Type ID	Printer type
3,51	Printer feature ID	Printing method and Printer size

• Transmits specified printer information, using n as follows:

n	Printer ID type	Specification
65	Firmware version	Firmware version
66	Manufacturer	BIXOLON
67	Printer model	Printer model
69	Code page	Currently enabled code page

Remarks:

■ Printer information (When n = 65, 66, 67, 69) consist of [Header ~ NULL] data as shown below:

Transmitted data	Hex	Decimal	Amount of data
Header	5FH	95	1byte
Printer information	Depends on the model	Depends on the model	0-15 bytes
NUL	00H	0	1byte

■ The firmware version can be confirmed by self test printing.

■ This command can be executed in real-time command mode using DLE.

Differences: ■ The printer ID is shown according to printer models as follows:

Printer ID	SRP-500
1(Printer model ID)	0x0d
2(Type ID)	Type ID varies depending on functions the printer supports as follows: - 0x01 (Multi-byte character) - 0x02 (Autocutter) - 0x03 (Autocutter + Multi-byte character) - 0x04 (Customer display) - 0x05 (Multi-byte character + Display) - 0x07 (Customer display + Autocutter + Multi-byte Character)
3(Printer feature ID)	0x65
66(Manufacturer)	BIXOLON
67(Printer model)	SRP-500
69(Language of Font)	Code page currently being used. Refer to cod page setting command, ESC t.

GS V

Function: **Select cut mode and cut paper**

Code:

①	**ASCII**	GS	V	m	
	Hex	1D	56	m	
	Decimal	29	86	m	
②	**ASCII**	GS	V	m	n
	Hex	1D	56	m	n
	Decimal	29	86	m	n

Range: ① m=0, 1, 48, 49 ② m=65, 66, 0 ≤ n ≤ 255

Default: None

Description: This command cuts paper in the specified mode as follows.

m		Function
①	0,48	Executes a full cut (cuts the paper completely)
	1,49	Executes a partial cut (one point left uncut)
②	65	Feeds paper to (cutting position + n × vertical motion unit) and executes a partial cut(one point left uncut)
	66	Feeds paper to (cutting position + n × vertical motion unit) and executes a partial cut(one point left uncut)

Remarks: For ①

■ If an auto cutter is not provided, this command is ignored command is executed.

For ②

■ When n = 0, the printer feeds the paper to the cutting position and cuts it.

■ If an auto cutter is not provided, the printer only feeds the paper for specified amount.

■ Vertical motion unit is used for calculating a paper feed amount.

Differences: ■ Cutting mode is changed only by setting MSW2-2.

GS a

Function: **Enable/Disable Automatic Status Back (ASB)**

Code:

ASCII	GS	a	n
Hex	1D	61	n
Decimal	29	97	n

Range: 0 ≤ n ≤ 255

Default: n=0

Description:
- This enables or disables ASB (Automatic Status Back) according to n.
  - ASB is enabled when n > 0.

Remarks:
- ASB is the function that transmit the printer status such as cover open/close and Online/Offline] continuously at the time interval specified regardless of the status change if ASB is enabled. Using this ASB function, the host can check to see if the printer is running properly.
- Once ASB has been enabled, the printer continues to transmit the current printer status at the specified interval until ASB is disabled.
- When n = 0, ASB is disabled. The printer stops transmitting the status.
- With parallel and USB interface, the printer status is transmitted whenever the host computer changes to the reverse mode regardless of the printer status change. It is recommended that the periodic time interval at which the host changes to reverse mode is more than 500ms in order to receive the correct status.
- With serial interface, ASB status is transmitted continuously at the interval of 1 sec even if the status is not changed.
- The setting of this command remains effective until ESC @, printer reset or power cycling is executed.

■ The printer information transmitted is comprised of 4 bytes as follows:

• First byte(printer information)

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Not used. Fixed to Off
1	Off	00	0	Not used. Fixed to Off
2	Off	00	0	Drawer kick-out connector pin 3 is LOW
	On	04	4	Drawer kick-out connector pin 3 is HIGH
3	Off	00	0	On-line
	On	08	8	Off-line
4	On	10	16	Not used. Fixed to On
5	Off	00	0	Cover is close
	On	20	32	Cover is open
6	Off	00	0	Paper is not being fed by the paper feed button
	On	40	64	Paper is being fed by the paper feed butto
7	Off	00	0	Not used. Fixed to Off

• Second byte(printer information)

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Not used. Fixed to Off
1	Off	00	0	Not used. Fixed to Off
2	Off	00	0	No mechanical error
	On	04	4	Mechanical error
3	Off	00	0	No auto cutter error
	On	08	8	Auto cutter error occurred
4	Off	00	0	Not used. Fixed to Off
5	Off	00	0	No unrecoverable error
	On	20	32	Unrecoverable error
6	Off	00	0	No automatically recoverable error
	On	40	64	Automatically recoverable error occurred
7	Off	00	0	Not used. Fixed to Off

- If mechanical error (bit 2) or auto-cutter error (bit 3) occurs due to paper jams or the like, it is possible to recover by correcting a cause of the error and executing ENQ in real time mode.
- If an unrecoverable error (bit 5) occurs, turn off the power as soon as possible.

• Third byte (paper sensor information)

Bit	Off/On	Hex	Decimal	Function
0,1	Off	00	0	Paper near end sensor: paper adequate
	On	03	3	Paper near end sensor: paper near end
2,3	Off	00	0	Paper end sensor: paper present
	On	0C	12	Paper end sensor: no paper present
4	Off	00	0	Not used. Fixed to Off
5	Off	00	0	Not used. Fixed to Off
6	Off	00	0	Not used. Fixed to Off
7	Off	00	0	Not used. Fixed to Off

• Fourth byte (paper sensor information)

Bit	Off/On	Hex	Decimal	Function
0	On	01	1	Not used. Fixed to On
1	On	02	2	Not used. Fixed to On
2	On	04	4	Not used. Fixed to On
3	On	08	8	Not used. Fixed to On
4	Off	00	0	Not used. Fixed to Off
5	Off	00	0	Not used. Fixed to Off
6	Off	00	0	Not used. Fixed to Off
7	Off	00	0	Not used. Fixed to Off

Differences: None

GS r

Function: **Transmit status**

Code:

ASCII	GS	r	n
Hex	1D	72	n
Decimal	29	114	n

Range: n=1, 2, 49, 50

Default: None

Description: The command transmits the status specified by n as follows:

n	Function
1, 49	Transmits paper sensor status
2, 50	Transmits drawer kick-out connector status

Remarks:

- The status is one byte.
- The status to be transmitted is as follows:
  - Paper sensor status (n=1, 49):

Bit	Off/On	Hex	Decimal	Function
0, 1	Off	00	0	Paper near-end sensor: Paper adequate
	On	03	3	Paper near-end sensor: Paper near end
2, 3	Off	00	0	Paper end sensor: Paper present
	On	0C	12	Paper end sensor: Paper not present
4	Off	00	0	Fixed
5	Off	00	0	Reserved
6	Off	00	0	Reserved
7	Off	00	0	Fixed

Bits 2 and 3: This command can not be executed when the printer is offline due to the lack of paper. Therefore, the status of bit 2 (1) and bit 3 (1) is not transmitted.

• Drawer kick-out connector status (n=2, 50):

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Drawer kick-out connector pin 3 is LOW
	On	01	1	Drawer kick-out connector pin 3 is HIGH
1	Off	00	0	Reserved
2	Off	00	0	Reserved
3	Off	00	0	Reserved
4	Off	00	0	Fixed
5	Off	00	0	Reserved
6	Off	00	0	Reserved
7	Off	00	0	Fixed

■ This command can be executed in real-time mode using DLE.

Differences: None

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